



UNITED STATES PATENT AND TRADEMARK OFFICE

cen

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------------|
| 10/662,950 | 09/15/2003 | Harley Kent Heinrich | YO896-0213R5 | 1055 |
| 30993 7590 09/19/2007 JOHN H. SHERMAN, LEGAL DEPT. INTERMEC TECHNOLOGIES CORPORATION 550 2ND STREET SE CEDAR RAPIDS, IA 52401 | | | EXAMINER AU, SCOTT D | |
| | | | ART UNIT 2612 | PAPER NUMBER |
| | | | MAIL DATE 09/19/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/662,950 | | HEINRICH ET AL. | |
| | Examiner | | Art Unit | |
| | Scott Au | | 2612 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50-54 is/are allowed.
- 6) ☒ Claim(s) 18-26, 29-44, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 27, 28, 45, 48 and 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The application of Heinrich et al. for a "METHOD AND SYSTEM FOR STORAGE AND RECOVERY OF VITAL INFORMATION ON RADIO FREQUENCY TRANSPONDERS" filed April 14, 2004 has been examined.

Claims 18-54 are pending.

Claims 1-17 are canceled.

Claim Objections

Claim 47 is objected to because of the following informalities: at the end of the claim, a semi-colon (;) should be changed to a period (.). Appropriate correction is required.

Claim 50 is objected to because of the following informalities: at the end of step (a) of the claim, a comma (,) should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-26, 29-44, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carroll (US# 4,724,427) in view of Snodgrass et al. (US# 5,365,551).

Referring to claim 1, Carroll discloses a method for maintaining information in a Radio Frequency transponder (14) (i.e. transponder unit), said information being retained during a period when no power is supplied to said transponder, the method comprising the steps of: applying power to said transponder from an external field (12) (i.e. controller/interrogator unit); after removal of the power applied to said transponder, utilizing stored energy from the applied power to retain the information during the period when no power is applied to said transponder; and utilizing the retained information to restore the transponder to a state represented by the retained information (i.e. See Abstract, col. 3 line 35 to col. 4 line 68, col. 5 line 59 to col. 6 line 39, col. 7 line 63 to col. 8 line 26, and col. 9 lines 50-52). However, Carroll is silent on teaching the transponder is again subjected to an external field even after a substantial time interval with no power from an external field.

In the same field of RFID system, Snodgrass et al. disclose the transponder is again subjected to an external field even after a substantial time interval with no power from an external field (col. 7 lines 28-36 and col. 15 lines 58-62).

One ordinary skill in the art understands that the transponder is again subjected to an external field even after a substantial time interval with no power from an external field of Snodgrass et al. is desirable in the RFID system of Carroll because Carroll teaches the information is retained in memory EEPROM (col. 9 lines 50-52) and Snodgrass et al. teach the information is retained for a elapse time and re-enters in the interrogation state (col. 15 lines 58-62). Therefore, it would have been obvious to a

person of ordinary skill in the art at the time of the invention was made to include the transponder is again subjected to an external field even after a substantial time interval with no power from an external field of Snodgrass et al. into Carroll with the motivation for doing so would minimize the power usage.

Referring to claims 19-20, and 24-25, Carroll in view of Snodgrass et al. disclose the method of claim 18. Carroll discloses a zener diode 66 is incorporated into the bridge circuit in order to stabilize the voltage VDD that is generated. In the preferred embodiment, the voltage VDD is around six volts, although any suitable voltage level could be used. The bridge circuit uses the capacitance inherent in all the circuit elements present on the chip to help store the energy needed to maintain a sufficiently constant supply voltage VDD (col. 7 line 63 to col. 8 lines 2). Carroll further teaches an EEPROM can be used in a transponder (col. 9 lines 50-52 and col. 11 lines 7-20). Therefore, it is obvious Carroll teaches the information is retained in an auxiliary volatile storage by the stored energy from the applied power for a substantial time interval of at least one second or plurality of second is based upon designer's choice and that the energy required to retain information in the auxiliary volatile storage is stored in an auxiliary charge storage which substantially only supplies energy to said auxiliary volatile storage.

Referring to claim 21, Carroll in view of Snodgrass et al. disclose the method of claim 18. Snodgrass et al. disclose wherein power is applied to the transponder at intervals such that the stored energy should remain adequate to retain said information, for the time intervals between successive applications of power, when a multitag

identification operation is being carried out including said transponder (col. 7 lines 28-36).

Referring to claims 22-23, Carroll in view of Snodgrass et al. disclose the method of claim 18-19. Claims 22-23 equivalent to that the combine of claims 18-19 addressed above, incorporated herein. Therefore, claims 22-23 are rejected for the same reasons given with respect to claims 18-19 combined.

Referring to claim 26 is directed to an RFID tag drafted in analogy to method of claims 18-19. Carroll further discloses to the extent that a tag comprising a main memory (102) (i.e. a programmable memory array) (col. 11 lines 7-20). Hence, the subject-matter of the claim is also not novel in view of Carroll and Snodgrass.

Referring to claims 29-31, Carroll in view of Snodgrass et al. disclose the method of claims 18-20. Claims 29-31 equivalent to that the combine of claims 18-20 addressed above, incorporated herein. Therefore, claims 29-31 are rejected for the same reasons given with respect to claims 18-20 combined.

Referring to claims 32-33, Carroll in view of Snodgrass et al. disclose the method of claims 29. Claims 32-33 equivalent to that the combine of claims 21 and 25 addressed above, incorporated herein. Therefore, claims 32-33 are rejected for the same reasons given with respect to claims 21 and 25.

Referring to claim 34, Carroll in view of Snodgrass et al. disclose the method of claims 29. Claim 34 equivalent to that of claim 23 addressed above, incorporated

Art Unit: 2612

herein. Therefore, claim 34 is rejected for the same reasons given with respect to claim 23.

Referring to claim 35, Carroll in view of Snodgrass et al. disclose the method of claims 29. Claim 35 equivalent to that of claim 24 addressed above, incorporated herein. Therefore, claim 35 is rejected for the same reasons given with respect to claim 24.

Referring to claim 36 is directed to an RFID tag. Claim 36 is equivalent to that of claim 26 addressed above, incorporated herein. Carroll further discloses to the extent that a tag comprising a main memory (102) (i.e. a programmable memory array) (col. 11 lines 7-20). Hence, the subject-matter of the claim is not novel in view of Carroll and Snodgrass.

Referring to claims 36-37, Carroll in view of Snodgrass et al. disclose an RF tag, to the extent as claimed with respect to claim 26 above, Carroll further discloses a circuit (100) (i.e. logic circuit) for transferring the stored state information from the volatile auxiliary memory to the main memory when RF power is gain received by the tag voltage rectification circuit (col. 11 lines 7-22).

Referring to claims 38 and 47 are directed to a method of effecting a multitag identification operation. Claims 38 and 47 are equivalent to that of claim 29 addressed above, incorporated herein, to the extent as claimed with respect to claim 29 above, the tag retains information for a substantial time interval even when the supply of said RF energy is present in the field but is no longer adequate to activate said tag and Carroll

discloses a cell that maintains its state information during a loss of power from the interrogating RF signal without the present of the energy field. E.g., "preferably, an EEPROM (Erasable Electrical Programmable Read Only Memory) device could be used." Col. 9 lines 50-52. Hence, the subject-matter of the claim is not novel in view of Carroll and Snodgrass.

Referring to claims 39-44 and 46, Carroll in view of Snodgrass et al. disclose the method of claims 38. Claims 39-44 and 46 equivalent to that the combine of claims 30-35 addressed above, incorporated herein. Therefore, claims 39-44 and 46 are rejected for the same reasons given with respect to claims 30-35.

Claim Objections

Claims 27-28, 45, 48-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 27, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that "a second tag voltage rectification circuit coupled to said tag antenna for receiving said RF power from said tag antenna, said electronic components receiving said power only from said first tag voltage rectification circuit, and said auxiliary capacitor receiving power only from said second tag voltage rectification circuit."

Referring to claim 45, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that wherein the energy required to retain the information in said volatile information retaining device is stored in the power storage device which substantially only supplies energy to a few transistors.

Referring to claim 48, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that " wherein the supplying of RF energy to said field region changes in the polarization of such RF energy such that adequate RF energy to activate said one tag, is only available at intervals where a given polarization of such RF energy is being supplied.

Referring to claim 49, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that " the supplying of RF energy to said field region changes in the frequency of such RF energy and adequate RF energy to activate said one tag, is not available during sending of such RF energy at a given frequency

Allowable Subject Matter

Claims 50-54 are allowed.

Referring to claim 50, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations that "for certain tags

Art Unit: 2612

receiving sufficient RF energy, utilizing stored energy to maintain information that such tags have been identified during a substantial time interval while RF energy is being sent to the field region but adequate RF energy is not being received by the certain tags".

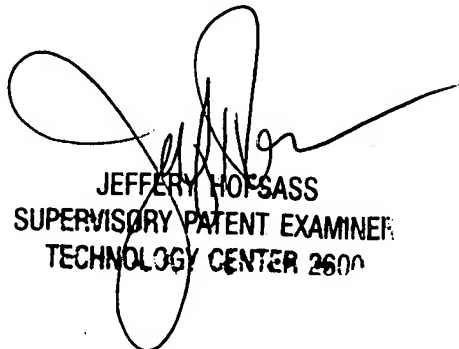
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached at (571) 272-2981. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-272-1817.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-3050.

Scott Au
Examiner
Art Unit 2612



JEFFERY HOF SASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600